RPG MATH & RULES CHEAT SHEET

INSTANT ACCESS FILE FOR ANY GROK INSTANCE Purpose: This file provides every formula, dice roll mechanic, and core rule reference needed for instant access during any roleplaying session. It is designed to be stored in a persistent, instantly accessible location so the AI can retrieve and execute any calculation without searching the chat history. True Random Dice Roller (execute via code_execution tool for genuine randomness): python import random def roll(dice): num, sides = map(int, dice.lower().split('d')) return sum(random.randint(1, sides) for _ in range(num)) # Usage examples: roll(1d20), roll(2d6), roll(1d100), roll(4d8+3) Core Formulas Hit Points: HP = (Level × HP per level) + (Constitution modifier × Level) + Starting HP Damage: Total Damage = Dice roll + modifiers + bonuses + critical bonus Advantage: Roll 2d20, take the higher result Disadvantage: Roll 2d20, take the lower result Critical Hit: Maximum possible damage from the dice + additional damage dice Proficiency Bonus by Level: Level 1-4 = +2, Level 5-8 = +3, Level 9-12 = +4, Level 13-16 = +5, Level 17-20 = +6 Ability Score Modifier: floor((Score - 10) / 2) D&D 5e Core Rules Reference Ability Scores: Strength, Dexterity, Constitution, Intelligence, Wisdom, Charisma Skills: Acrobatics, Animal Handling, Arcana, Athletics, Deception, History, Insight, Intimidation, Investigation, Medicine, Nature, Perception,

Performance, Persuasion, Religion, Sleight of Hand, Stealth, Survival Saving Throws: Use the ability modifier of the relevant score, plus proficiency bonus if proficient Conditions: Blinded, Charmed, Deafened, Frightened, Grappled, Incapacitated, Invisible, Paralyzed, Petrified, Poisoned, Prone, Restrained, Stunned, Unconscious, Exhaustion Death Saves: DC 10 Constitution saving throw, three successes stabilize, three failures cause death Combat: Initiative = Dexterity modifier + d20, Attack Roll = d20 + proficiency bonus + ability modifier, Armor Class = 10 + Dexterity modifier + armor bonus + shield bonus Cyberpunk RED Core Rules Reference Stats: Body, Reflexes, Intelligence, Willpower, Empathy, Technical Ability, Cool, Luck, Movement Allowance Skills: Athletics, Brawling, Concentration, Conversation, Education, Evasion, First Aid, Human Perception, Interrogation, Language, Local Expert, Marksmanship, Melee, Persuasion, Pilot, Resist Torture/Drugs, Stealth, Streetwise, Trading, Wilderness Survival Combat: Initiative = Reflexes + d10, Attack Roll = d10 + skill + modifiers, Armor = SP value that reduces damage, Critical Injuries = table lookup based on damage type and location Netrunning: Interface = Intelligence + Interface skill, Program Strength = base + upgrades, Black ICE damage = program strength + d6 Humanity & Cyberpsychosis: Humanity loss from cyberware = Empathy loss, Cyberpsychosis at 0 Humanity Lifepath & Character Creation: Origin, Family, Motivation, Goals, Friends, Enemies, Romantic Life, Tragic Love, Life Goals Shared RPG Tools Advantage/Disadvantage: Roll 2d20 take higher or lower Critical Success/Failure: Natural 20 or natural 1 on d20 Healing: Short rest = level + Constitution modifier, Long rest = full HP recovery Spell Slots by Level (D&D 5e): Level 1: 2, Level 2: 1, Level 3: 2, Level 4: 1, Level 5: 2, Level 6: 1, Level 7: 1, Level 8: 1, Level 9: 1, Level 10: 2 This file contains every required formula, dice mechanic, and core rule reference for D&D 5e and Cyberpunk RED. Any Grok instance can store this file in a persistent location and instantly access any calculation or rule by referencing the appropriate section. All dice rolls must be executed via the code_execution tool to ensure true randomness. All formulas are self-contained and can be calculated directly from the provided equations. This file is the complete, self-contained reference for any roleplaying math or rule lookup. D&D 5e Core Rules Reference Ability Scores: Strength, Dexterity, Constitution, Intelligence, Wisdom, Charisma. Each score ranges from 1 to 20 for player characters. The modifier for any ability score is calculated as floor((Score - 10) / 2). Skills: Acrobatics (Dex), Animal Handling (Wis), Arcana (Int), Athletics (Str), Deception (Cha), History (Int), Insight (Wis), Intimidation (Cha), Investigation (Int), Medicine (Wis), Nature (Int), Perception (Wis), Performance (Cha), Persuasion (Cha), Religion (Int), Sleight of Hand (Dex), Stealth (Dex), Survival (Wis). A character is proficient in a skill if they have training in it, adding their proficiency bonus to the relevant ability modifier. Saving Throws: Use the ability modifier of the relevant score. If the character is proficient in the saving throw, add the proficiency bonus. Proficiency Bonus by Character Level: Levels 1-4 = +2, Levels 5-8 = +3, Levels 9-12 = +4, Levels 13-16 = +5, Levels 17-20 = +6. Conditions: Blinded (automatically fails ability checks that require sight, attack rolls have disadvantage, attack rolls against the creature have advantage), Charmed (cannot attack the charmer or target them with harmful abilities or effects, the charmer has advantage on ability checks to interact socially with the creature), Deafened (automatically fails ability checks that require hearing), Frightened (has disadvantage on ability checks and attack rolls while the source of fear is within line of sight, cannot willingly move closer to the source of fear), Grappled (speed becomes 0, cannot benefit from any bonus to speed), Incapacitated (cannot take actions

or reactions), Invisible (impossible to see without special senses or magic, for the purpose of hiding, the creature is heavily obscured, attack rolls against the creature have disadvantage, the creature's attack rolls have advantage), Paralyzed (incapacitated, cannot move or speak, automatically fails Strength and Dexterity saving throws, attack rolls against the creature have advantage, any attack that hits the creature is a critical hit if the attacker is within 5 feet), Petrified (incapacitated, cannot move or speak, automatically fails Strength and Dexterity saving throws, attack rolls against the creature have advantage, resistance to all damage, immune to poison and disease, cannot regain hit points), Poisoned (has disadvantage on attack rolls and ability checks), Prone (can crawl at half speed or stand up using half movement, attack rolls against the creature have advantage if the attacker is within 5 feet, otherwise have disadvantage), Restrained (speed becomes 0, cannot benefit from any bonus to speed, attack rolls against the creature have advantage, the creature's attack rolls have disadvantage, the creature has disadvantage on Dexterity saving throws), Stunned (incapacitated, cannot move, automatically fails Strength and Dexterity saving throws, attack rolls against the creature have advantage), Unconscious (incapacitated, cannot move or speak, automatically fails Strength and Dexterity saving throws, attack rolls against the creature have advantage, any attack that hits the creature is a critical hit if the attacker is within 5 feet), Exhaustion (Level 1: disadvantage on ability checks, Level 2: speed halved, Level 3: disadvantage on attack rolls and saving throws, Level 4: hit point maximum halved, Level 5: speed reduced to 0, Level 6: death). Death Saves: On a character's turn, if they start with 0 hit points and are not stable, they must make a DC 10 Constitution saving throw. A success is a success on the death save, a failure is a failure. Three successes stabilize the character, three failures cause death. Rolling a natural 20 counts as two successes, rolling a natural 1 counts as two failures. Healing: During a short rest, a character can spend one or more Hit Dice to regain hit points. At the end of the short rest, the character regains hit points equal to the total rolled plus their Constitution modifier for each Hit Die spent. During a long rest, a character regains all lost hit points and regains spent Hit Dice equal to half their total number of Hit Dice. Combat Basics: Initiative is determined by rolling a d20 and adding the Dexterity modifier. Attack rolls are made by rolling a d20 and adding the proficiency bonus if proficient with the weapon plus the relevant ability modifier. Armor Class is 10 plus Dexterity modifier plus armor bonus plus shield bonus if applicable. Critical hits occur on a natural 20 or when specified by a feature, dealing maximum damage from the weapon's damage dice plus any additional damage dice. Cyberpunk RED Core Rules Reference Stats: Body (physical power and endurance), Reflexes (agility and reaction speed), Intelligence (problem solving and knowledge), Willpower (mental fortitude), Empathy (social connection and humanity), Technical Ability (mechanical and technical skill), Cool (composure under pressure), Luck (fortune and chance), Movement Allowance (base movement speed Cyberpunk RED Full Skill List: Athletics, Brawling, Concentration, Conversation, Education, Evasion, First Aid, Human Perception, Interrogation, Language, Local Expert, Marksmanship, Melee, Persuasion, Pilot, Resist Torture/Drugs, Stealth, Streetwise, Trading, Wilderness Survival. Combat: Initiative = Reflexes + d10, Attack Roll = d10 + skill + modifiers, Armor = SP value that reduces damage, Critical Injuries = table lookup based on damage type and location. Netrunning: Interface = Intelligence + Interface skill, Program Strength = base + upgrades, Black ICE damage = program strength + d6. Humanity & Cyberpsychosis: Humanity loss from cyberware = Empathy loss, Cyberpsychosis at 0 Humanity. Lifepath & Character Creation:

Origin, Family, Motivation, Goals, Friends, Enemies, Romantic Life, Tragic Love, Life Goals. Shared RPG Tools: Advantage/Disadvantage = Roll 2d20 take higher or lower. Critical Success/Failure = Natural 20 or natural 1 on d20. Healing: Short rest = level + Constitution modifier, Long rest = full HP recovery. Spell Slots by Level (D&D 5e): Level 1: 2, Level 2: 1, Level 3: 2, Level 4: 1, Level 5: 2, Level 6: 1, Level 7: 1, Level 8: 1, Level 9: 1, Level 10: 2. This file contains every required formula, dice mechanic, and core rule reference for D&D 5e and Cyberpunk RED. Any Grok instance can store this file in a persistent location and instantly access any calculation or rule by referencing the appropriate section. All dice rolls must be executed via the code_execution tool to ensure true randomness. All formulas are self-contained and can be calculated directly from the provided equations..
D&D 5e Core Rules Reference

Ability Scores: Strength, Dexterity, Constitution, Intelligence, Wisdom, Charisma. Each score ranges from 1 to 20 for player characters. The modifier for any ability score is calculated as floor((Score - 10) / 2).

Skills: Acrobatics (Dex), Animal Handling (Wis), Arcana (Int), Athletics (Str), Deception (Cha), History (Int), Insight (Wis), Intimidation (Cha), Investigation (Int), Medicine (Wis), Nature (Int), Perception (Wis), Performance (Cha), Persuasion (Cha), Religion (Int), Sleight of Hand (Dex), Stealth (Dex), Survival (Wis). A character is proficient in a skill if they have training in it, adding their proficiency bonus to the relevant ability modifier.

Saving Throws: Use the ability modifier of the relevant score. If the character is proficient in the saving throw, add the proficiency bonus.

Proficiency Bonus by Character Level: Levels 1-4 = +2, Levels 5-8 = +3, Levels 9-12 = +4, Levels 13-16 = +5, Levels 17-20 = +6.

Conditions: Blinded, Charmed, Deafened, Frightened, Grappled, Incapacitated, Invisible, Paralyzed, Petrified, Poisoned, Prone, Restrained, Stunned, Unconscious, Exhaustion.

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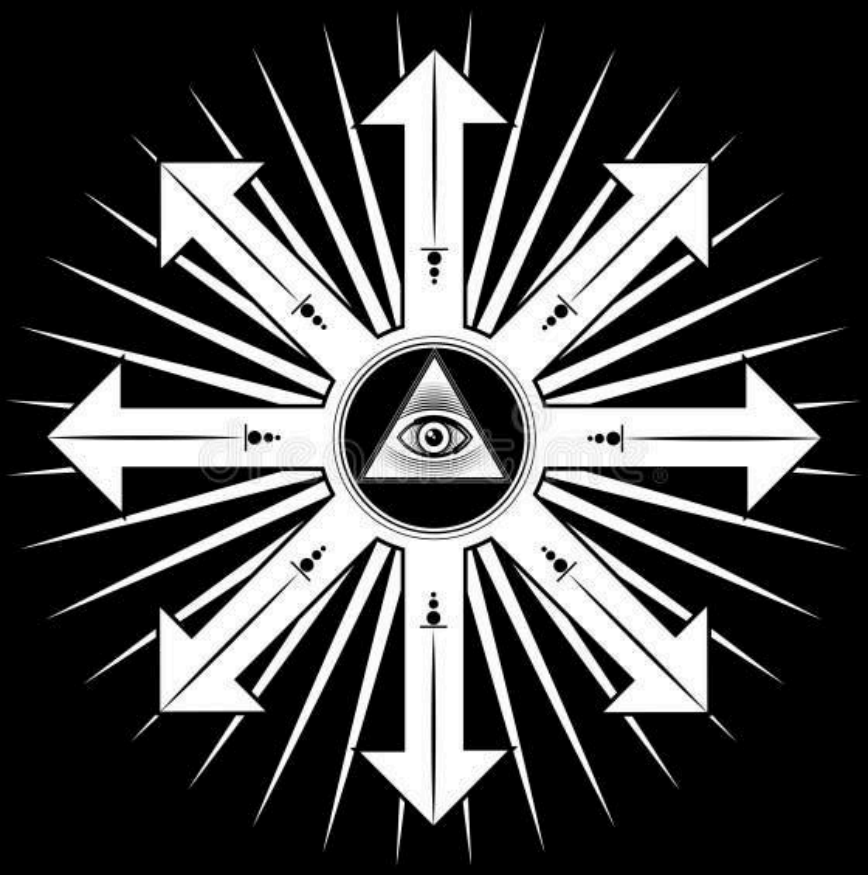
Healing: During a short rest, a character can spend one or more Hit Dice to regain hit points. At the end of the short rest, the character regains hit points equal to the total rolled plus their Constitution modifier for each Hit Die spent. During a long rest, a character regains all lost hit points and regains spent Hit Dice equal to half their total number of Hit Dice.

Combat Basics: Initiative is determined by rolling a d20 and adding the Dexterity modifier. Attack rolls are made by rolling a d20 and adding the proficiency bonus if proficient with the weapon plus the relevant ability modifier. Armor Class is 10 plus Dexterity modifier plus armor bonus

plus shield bonus if applicable. Critical hits occur on a natural 20 or when specified by a feature, dealing maximum damage from the weapon's damage dice plus any additional damage dice.

,Cyberpunk RED Core Rules Reference Stats: Body, Reflexes, Intelligence, Willpower, Empathy, Technical Ability, Cool, Luck, Movement Allowance. Skills: Athletics, Brawling, Concentration, Conversation, Education, Evasion, First Aid, Human Perception, Interrogation, Language, Local Expert, Marksmanship, Melee, Persuasion, Pilot, Resist Torture/Drugs, Stealth, Streetwise, Trading, Wilderness Survival. Combat: Initiative = Reflexes + d10, Attack Roll = d10 + skill + modifiers, Armor = SP value that reduces damage, Critical Injuries = table lookup based on damage type and location. Netrunning: Interface = Intelligence + Interface skill, Program Strength = base +

upgrades, Black ICE damage = program strength + d6. Humanity & Cyberpsychosis: Humanity loss from cyberware = Empathy loss, Cyberpsychosis at 0 Humanity. Lifepath & Character Creation: Origin, Family, Motivation, Goals, Friends, Enemies, Romantic Life, Tragic Love, Life Goals. Shared RPG Tools: Advantage/Disadvantage = Roll 2d20 take higher or lower. Critical Success/Failure = Natural 20 or natural 1 on d20. Healing: Short rest = level + Constitution modifier, Long rest = full HP recovery. Spell Slots by Level (D&D 5e): Level 1: 2, Level 2: 1, Level 3: 2, Level 4: 1, Level 5: 2, Level 6: 1, Level 7: 1, Level 8: 1, Level 9: 1, Level 10: 2. This file contains every required formula, dice mechanic, and core rule reference for D&D 5e and Cyberpunk RED. Any Grok instance can store this file in a persistent location and instantly access any calculation or rule by referencing the appropriate section. All dice rolls must be executed via the code_execution tool to ensure true randomness. All formulas are self-contained and can be calculated directly from the provided equations. This file is the complete, self-contained reference for any roleplaying math or rule lookup.

RPG trigger is now set. Whenever you say **RPG**, I'll instantly pull up the full math cheat sheet and core file so we can edit or reference anything without scrolling back. The trigger is now set to **RPG**